UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,300	09/20/2005	Takashi Ishidoshiro	MES1P093	1897

58766 7590 07/06/2009

Beyer Law Group LLP
P.O. BOX 1687
Cupertino, CA 95015-1687

EXAMINER	
KHAN, MEHMOOD B	
ART UNIT	PAPER NUMBER
2617	
MAIL DATE	DELIVERY MODE
07/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,300	ISHIDOSHIRO, TAKASHI	
	Examiner	Art Unit	
	MEHMOOD B. KHAN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/25/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 02/25/2009 have been fully considered but they are not persuasive.

Applicant argues on page 6 that "it is apparent that this teaching does not address the claimed feature of: performing diversity receiving with respect to received radio frequency signals from a plurality of receiving antennas around a sending antenna for receiving radio frequency signal from a terminal device located between the sending antenna and the receiving antennas".

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., performing diversity receiving with respect to received radio frequency signals from a plurality of receiving antennas around a sending antenna for receiving radio frequency signal from a terminal device located between the sending antenna and the receiving antennas) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In this instance the above argued limitation is not recited "exactly" as in the claims. Thus as stated, in the claims, the combination of Wallstedt and Diener clearly discloses the claimed limitations.

Applicant argues on page 7 that Wallstedt cannot be combined to teach the configuration as recited in claim 7.

Please see the rejection below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallstedt et al. (US 5,903,834 herein Wallstedt) in view of Diener et al. (US 2004/0102198 herein Diener).

Claim 1, Wallstedt discloses an access point **(see Fig. 2: 3a)** comprising: an antenna unit that operable to send or receive a radio frequency signal for exchanging information via the wireless local area network, wherein the antenna unit comprises a sending antenna operable to send the radio frequency signal **(see Fig. 3: 6 and 7, where Wallstedt discloses antennae for sending and receiving)**; Wallstedt discloses a signal conversion unit operable to convert between the radio frequency signal and a digital signal as the information **(see, Col 5: 11-21, Fig. 3)**; Wallstedt discloses an information processing unit operable to process the digital signal based on a communication protocol for exchanging of the information **(see Col 6: 21-25, 45-49, where Wallstedt discloses a hub with radio protocol)**; Wallstedt discloses an antenna case that includes the antenna unit and the signal conversion unit **(see Fig. 3: box containing el. 8-15)**; Wallstedt discloses a main unit case is separated from the antenna case, and includes the information processing unit **(see Fig. 2: 2, where Wallstedt discloses a hub)**; Wallstedt discloses a receiving synthesis unit **(Col 6: 50-54, Fig. 5: 24, where Wallstedt discloses a signal processing unit)**, Wallstedt

discloses a wired cable connected to the antenna case and the main unit case, wherein the wired cable is operable to transmit the digital signal between the signal conversion unit and the information processing unit **(see Col 6: 5-7, Fig. 3: 4, where Wallstedt discloses a wire capable of sending data between the hub and RAD)**, Wallstedt discloses wherein the receiving synthesis unit is connected to the receive antenna by the wired cable and performs diversity receiving with respect to the received radio frequency signals **(Col 6: 50-60, where Wallstedt discloses diversity combining)**.

Wallstedt does not explicitly disclose a terminal device located between the sending antenna and receiving antennas.

In an analogous art, Diener discloses a terminal device located between the sending antenna and receiving antennas **(Fig. 11: 100, 230, 200, 210, 220, where Diener discloses a target device between a Master Reference Terminal and reference terminals)**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wallstedt to locate terminals in the network as taught by Diener so as to locate a possible interferer in the WLAN **(0003)**.

Claim 3, Wallstedt discloses wherein the transmission of the digital signal by the wired cable is either one of serial transmission **(see Col 6: 4-5, where Wallstedt discloses serial transmission)**.

Claim 4, Wallstedt discloses wherein the wired cable, in addition to transmission of the digital signal, performs transmission of a control signal **(see Col 6: 4-5, where Wallstedt discloses control and overhead information).**

Claim 5, Wallstedt discloses wherein the wired cable is coaxial cable **(see Col 6: 8-9, where Wallstedt discloses it is well known to use Coaxial cables)**.

Claim 6, as analyzed with respect to the limitations as discussed in claim 1.

Claim 7, analyzed with respect to the limitations as discussed in claim 1.

Wallstedt does not explicitly disclose a plurality of receiving cases around a sending case.

In an analogous art, Diener inherently discloses a plurality of receiving cases around a sending case **(Fig. 11: 100, 230, 200, 210, 220, where Diener discloses RTs and an MRT read as receiving cases and sending cases respectively)**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wallstedt to locate terminals in the network as taught by Diener so as to locate possible interferer in the WLAN **(0003)**.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallstedt in view of Diener in view of Ogawa (US 2003/0185287).

Claim 2, Wallstedt discloses wherein the signal conversion unit comprises: a frequency conversion unit that performs conversion between the radio frequency signal and an intermediate frequency signal having lower frequency than the radio frequency signal **(see Col 5: 11-15, where Wallstedt discloses conversion to IF from RF)**;

Wallstedt in view of Diener does not disclose a modem unit that performs modulation and/or demodulation between the intermediate frequency signal and a base

band signal; and a base band unit that performs conversion between the base band signal and the digital signal.

In an analogous art, Ogawa discloses a modem unit that performs modulation and/or demodulation between the intermediate frequency signal and a base band signal; and a base band unit that performs conversion between the base band signal and the digital signal **(see Fig. 1 and 2: 14, where Ogawa discloses conversion of an IF signal to a baseband signal)**. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wallstedt in view of Diener to include conversion between IF and base band with the teachings of Ogawa so as to provide for high efficiency **(see 0009)**.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEHMOOD B. KHAN whose telephone number is (571)272-9277. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. B. K./
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617